

ABSTRACT OF THE DISCLOSURE

The invention relates to an adsorbent catalyst for reducing the amounts of nitrogen oxides, hydrocarbons and carbon monoxide contained in exhaust or combustion gases, which catalyst adsorbs nitrogen oxides, when the exhaust or combustion gases contain in excess of oxygen, and liberates and reduces the adsorbed nitrogen oxides, when the gases contain oxygen in stoichiometric amounts or less, which adsorbent catalyst include a porous support material the surface area of which is large and which contains at least the following: a first catalytic metal, which is preferably Pt, a first NO_x adsorbent, which preferably contains at least one of the following metals: Ba and Sr, a second NO_x adsorbent, which preferably contains at least one of the following metals: La and Y, and a redox NO_x adsorbent, which preferably contains at least one of the following metals: Ce, Zr, Ti, Nb, Mn, Pr, Nd, Sm, Eu and G. The invention also relates to methods for reducing the amounts of nitrogen oxides, hydrocarbons and carbon monoxide contained in exhaust or combustion gases.